

DATA BRIEF

Doctorate Awards Increase in S&E Overall, but Computer Science Declines for First Time

by Susan T. Hill

Among non-U.S. citizens, there were significant increases in doctorate recipients from India, Brazil, and China.

Universities in the United States awarded a record 27,230 doctorates in science and engineering (S&E) fields in 1996, about 3 percent more than the number awarded the previous year. This increase continues a pattern of slower growth in S&E doctorate awards seen since 1991; annual increases have ranged from 1 to 3 percent. From 1987 to 1991, annual increases in S&E doctorate awards were 4 to 5 percent.

Doctorate awards in engineering increased 5 percent over the 1995 level, compared to 2 percent for the sciences. Among engineering fields, there were increases in doctorates awarded in most subfields; the largest numerical increases were in chemical, civil,

aeronautical, and biomedical engineering.

Among science doctorate awards, most of the 1995-96 increase was found in the biological sciences. Both mathematics and computer science had significant declines in the number of doctorate awards—computer science for the first time ever. Doctorate awards in the rest of the science fields remained relatively stable between 1995 and 1996 (table 1).

The slower growth in S&E doctorate awards from U. S. universities in recent years occurred among both U.S. citizens and non-U.S. citizens. In 1996, non-U.S. citizens still accounted for 40 percent of all S&E doctorate recipients in U.S. universities. Among non-U.S. citizens, there were significant increases,

Table 1. Doctorate awards by science and engineering field: 1987, 1995, and 1996

Field	Doctorate awards			Percent change 1995 to 1996
	1987	1995	1996	
Total, all S&E fields.....	19,894	26,535	27,230	2.6
Engineering.....	3,712	6,008	6,305	4.9
Sciences, total.....	16,182	20,527	20,925	1.9
Physical sciences*.....	3,238	3,841	3,838	0.0
Astronomy.....	100	173	192	0.9
Physics.....	1,137	1,479	1,485	0.4
Chemistry.....	1,975	2,162	2,148	-0.6
Earth, atmos., ocean.....	602	780	794	1.7
Mathematics.....	740	1,190	1,122	-5.7
Computer sciences.....	450	997	921	-7.6
Biological sciences.....	3,839	5,376	5,723	6.4
Agricultural sciences.....	976	1,036	1,037	0.0
Social sciences.....	3,164	3,878	3,999	3.1
Psychology.....	3,173	3,429	3,491	1.8
Total, other fields.....	12,476	15,208	15,185	-0.1

* Includes "other physical science fields, not elsewhere classified."

SOURCE: NSF/SRS, Survey of Earned Doctorates.

Electronic Dissemination

SRS data are available through the World Wide Web (<http://www.nsf.gov/sbe/srs/stats.htm>) For NSF's Telephonic Device for the Deaf, dial 703-306-0090. If you are a user of electronic mail and have access to the internet, you may order publications electronically. Send requests to pubs@nsf.gov. In your request, include the NSF publication number and title, your name, and a complete mailing address.

however, in doctorate recipients from India, Brazil, and China. In 1996, China outnumbered each world region in the number of S&E doctorate recipients earning degrees in U.S. universities (chart 1).

For further information on doctorate recipients from China, see the forth-

coming SRS Issue Brief on S&E Doctorate Recipients From China.

User Notes

Results presented here are from the 1996 Survey of Earned Doctorates for the 1995-96 academic year. Graduate students complete the survey form when they have fulfilled requirements

for a research doctorate. The response rate was 94 percent in 1996 (these data are subject to slight revision as a result of updating from late responses). The survey was conducted for the National Science Foundation and four other agencies by the National Research Council.

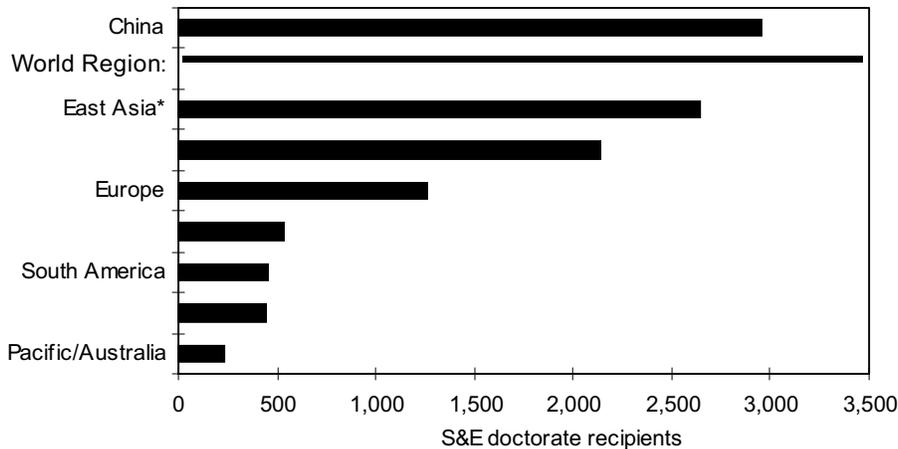
This Data Brief was prepared by Susan T. Hill, who may be reached at the following address:

**National Science Foundation
Division of Science Resources Studies
Human Resources Statistics Program
4201 Wilson Boulevard, Suite 965
Arlington, VA 22230**

**Telephone: (703) 306-1774 (ext. 6915)
E-mail: sthill@nsf.gov.**

This Data Brief is based on detailed data available in the forthcoming report *Science and Engineering Doctorate Awards: 1996*. For free printed copies of this Data Brief or the reports cited above, write to the above address, call (301) 947-2722, or e-mail to pubs@nsf.gov.

Chart 1. Foreign citizen doctorate recipients in U.S. universities in S&E fields, for China and by world region: 1996



*Excluding China

NOTE: Includes foreign citizens on temporary and permanent resident visas.

SOURCE: NSF/SRS, Survey of Earned Doctorates

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